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EXXXTASY and Other Adult Service Programmers

As reported in SatFACTS for August 15th, the two top people at Exxxtasy came to Australia (August 2-5) and New Zealand (August 5-7) to explore possible distribution alliances in the Pacific. For the newcomer, this brief statement of facts:

Exxxtasy is a North American triple-X rated adult service channel. It is one of three programming channels created by a firm called "Fifth Dimension." Exxxtasy is a "doing business as" name, a programme channel service name, not a corporate name. Exxxtasy has a contractual agreement with SPACE TV Systems, a Taiwan based Mandarin and Asian language service which began testing on Intelsat 702 at 177E, Ku band, during June. Exxxtasy is added to the SPACE TV Systems (STS) digital bouquet at Brewster, Washington and transmitted through I702 to Asia on one beam, Australia on a second beam. Exxxtasy and some (but not all) of the STS programme channels (there are presently 24 total) can be accessed only with conditional access (CA) IRDs provided through STS. These IRDs are reported to be manufactured by French firm Thomson using a smart card conditional access system developed by French Telecom and known as Viaccess. STS plans to give away as many as 50,000 of these IRDs to consumers who subscribe to their service in Asia and Australia. Whether consumers subscribing only to the Exxxtasy service will also be given IRDs is not known but after our two-day visit with President Stuart Duncan and VP of International Sales Fred Pantalone, we believe subscribers for Exxxtasy will be required to purchase their IRDs.

SatFACTS for July reported on the technical details of the service and added our own research concerning the legality of redistributing triple-X rated material. SatFACTS for August updates the report by adding that Exxxtasy would prefer to bring an 'R' rated channel to Australasia and through

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-NEW MPEG 2 Services (after August 15 SatFACTS Update - to August 20)-

New Chinese SCPC: LN TV (3759 Hz; 04.418 and 3/4)
New WTN London feed: (3765 Hz, 05.630 and 3/4)
Moved Chinese: GXTV (SCPC) now on 3831 As2 Vt, was 3805 Vt
Hallmark Movies: As2 (3940 Vt, 26.655, 2/3) (erratic service)
PanAmSat PAS-2 Ku (12.377 Vt, 6.620 and 2/3)
Latest Star TV As2 transponder: 4156 Vt (28.100 and 3/4); five programme channels

the R channel offer Exxxtasy as an optional second channel. Some background on the differences between X and R.

R rated material has been found not to be obscene or indecent. X rated movies can be either or both; it only takes one classification to cause a film to be X rated.

Obscene: "*Offensively or repulsively indecent, especially by offending accepted sexual morality.*" Under British law, "*tending to deprave or corrupt.*"

Indecent: "*Offending against recognised standards of decency, highly unsuitable.*"

Being indecent is a problem, indecently obscene is double jeopardy.

There are **two** levels of legal concern with any "adult" level service. Level one deals with the bureaucracy of rating films:

1) A country typically will have an established film review board. Its job is to receive, review and then assign a classification (rating) to every film to be displayed in a country through theatres, video rental stores or any form of television. In New Zealand, each film submitted requires a $500 payment to the film review board as an application fee. The fee is not returned. Supporting national film review/rating boards are typically laws or regulations which make it a fineable offence to distribute (show on television) any film that has not been rated by that country's review board. An American or British rating is not a substitute for (local) film board review. What happens to someone who distributes material without the mandatory film rating review varies from country to country; typically, the "monetary fine" is greater by a significant amount than the film review application fee.

Level two deals with enforcement. Each country has its own laws regarding both film classification and film regulation. We will use New Zealand as an example - any member who can educate us regarding other countries is encouraged to do so and we will pass the information along in a future Membership Notes.

New Zealand does not employ "morality police." That is, there are no government employees paid to go around snooping into what people are watching or reading. Instead, it relies upon "complaints from the public" at large. If a member of the public registers a complaint, there is a mechanism in place to investigate the complaint and to then determine if some rule, regulation or law has been broken. An example: It is illegal to stand up in an occupied movie theatre and shout loudly, "*Fire - fire - fire!*" when in fact there is no fire. Panic follows. If a person goes into an empty theatre and to the four walls shouts "Fire-fire-fire!", no law is broken. Translation: There is no such thing as an obscene or indecent movie or television programme, in New Zealand, until somebody complains to the regulatory agency. Then that agency is duty bound to investigate and determine if, in fact, the film/programme is/was indecent and/or obscene.

What this says is that as long as ONLY those persons who have waived their rights to complain are shown the film or television programme, there can be no complaint process. How does a person waive such rights? By knowing before viewing the film or programme the general contents, and, by being a "willing" (not accidental) viewer of the content. This is the "consenting adults" test. Someone is told the film they are going to view "has explicit sexual content" and that "it may offend some people." This is a gate check: Anyone who does not wish to run the risk of being offended stops at that point.

There is a grey area here. A person who has knowledge of such a film or programme, but who has not actually seen it, can in theory file a complaint. Normally, the complaint investigation procedure will dismiss any such unviewed complaint (that is, a person complaining on generalities, not because they were personally exposed to the material and were as a result offended). There is a chance, however, that if a substantial group (such as a church, moral rights activist lobby) files a "friend of the court" (concerned party) complaint that the complaint will be investigated without a direct "offended party" complaint.

The object here is to avoid having any complaints filed. This is best done by keeping a very low profile for a service, and never (never!) stepping over the line and showing it in a public (or unrestricted entry, private) place. The minute somebody sees the material, and is offended, the complaint procedure is underway.

As a practical matter, how do you avoid this risk? First of all, the service should not be available in your showroom. A dealer might elect to have a "private showroom" which has restricted entry and

then back that up with a short written agreement which every person entering that room to view the adult service signs (**1**).

That might handle your own selling of equipment for an adult channel (or channels), but what about your client s? At the present time, it does not appear likely that any system distributor or dealer will be authorised to act as an "agent" for an adult channel. You will offer equipment, and subject to the previous paragraphs, you might offer a "sneak look" at the content of the service (**2**). As for accepting an order (and payment) for an adult channel, that is very unlikely to be handled except through an offshore telephone contact. How does your customer even learn this telephone number? If you as a dealer or distributor provided a comprehensive list of every service you can locate with their telephone contact numbers, inside of this extensive list you could (would) also include the number for the adult service. What you want to avoid is any direct action that makes you even a promoter (much less an agent) of the service. Even passing out Exxxtasy Channel business cards could be considered an "agent activity."

The over riding aspect of this is that there must be a client who is of "adult age" and they must on their own "consent" to having the adult programming delivered to their home. Now, what about commercial (SMATV) installations?

The **first** question relates to the movie classification aspect. If the film is not originating in your country, it cannot be deemed to have been "transmitted" from your country. Transmitting the film and receiving the film are two, totally separate, aspects. To "transmit" the film, film review board approval must be secured. No such approval is required for "receiving." Does a SMATV or cable system "transmit" the material which it receives via satellite? In the most narrow of technical respects, the answer could be yes. The service is "received" via a dish and IRD, which creates baseband video and audio. To connect the baseband video and audio to one or more motel rooms, or homes via SMATV or cable, a modulator is required. In the most rigid of technical rulings, a modulator could be found to be a "transmission device." If this is true, then it follows that each film "transmitted" via a SMATV or CATV system would be required to have film review board approval and rating before transmission. At (NZ)$500 per film, this immediately shuts down the project.

(Note: There can be no definitive "ruling" on whether SMATV or cable "transmit" without an appropriate court case. Nobody wants to be the instigator [or cause] of such a case so this part of distributing adult movies may remain a grey area for some time to come.)

The **second** aspect is the security of the service as it is distributed within a SMATV or cable TV system. SatFACTS for August 15th (page 22) describes the basic technical approach to "positive interdiction" (encryption) of a SMATV or CATV channel. What is important here is to ensure that an adult programme channel is not visible (or audible) to any room (or home) which has not given "(adult age) consent" to it being there. If enforcement activity only begins after a complaint is filed and in theory a complaint can be filed only by someone who has viewed such a service without first being asked for their permission (consent) to show it to them - obviously security is a key aspect of making the service available. The responsibility for obtaining consent is at two levels:

1) As the seller/installer of a SMATV system for a motel (et al), you have to be certain the system is appropriately secure that no one can accidentally view the content of the service. This is a system design and system installation challenge.

2) Once the system is installed and operating, it becomes the motel owner's responsibility to operate it in a way that does not allow accidental viewing of the adult material.

1/ Such as: I, (__name__) have been fully informed as to the explicit sexual content likely to be seen by my viewing the Exxxtasy Channel satellite television service. I am at least 21 years of age, and hereby waive any rights to complain to any agency or authority about the television programming viewed as a private guest of (name of dealer).

2/ Do not even consider making or allowing videotapes of the Exxxtasy service. As great as the temptation may be to do so, if you make or allow tapes to be made from your DTH terminal system, you have just become by law a "transmitter/distributor" of adult film material which has not been cleared by the (NZ) Film Review Board. The fines for recording and sharing/distributing even a single film can easily be several thousand dollars. Whether you charge for such tapes or not has no bearing on the legality of making the tapes.

Designing and installing it is one phase; operating it is a second phase. As an installer, you do not want the operator of the system to come back on you after the installation is completed and hold you responsible for accidental viewing which can be traced to a system planning fault rather than an operating fault.

The adult situation today:

1) **Exxxtasy**. This Canadian based service is in a test mode on Intelsat 702. A special (Thomson brand) conditional access equipped IRD is/will be required. The receivers are not available to the trade today (late August 1997) but are expected to become available before December 1st. Having the Thomson IRD is no guarantee of Exxxtasy service - that must be contracted for directly with Exxxtasy. An agency system for the Pacific is being considered; it is likely to be handled through a toll free call to some Pacific location such as Hong Kong, or, directly to Canada.

Exxxtasy is studying the possibility of providing an R programme channel as well as the X. This raises the possibility that for SMATV systems the system could take the less-indecent/obscene R service for part of the day (for example 6AM to 11PM) and then receiver-switch to the X rated service from 11PM to 6AM. At the SMATV/motel client level, fees in the region of "$20 per day/night" for access to the channel are marketable. At the home level, if there are both R and X rated channels from Exxxtasy, subscribers could have access to both channels 24 hours per day.

2) **Spice International**. This is an adult R rated service originating in the USA but also distributed in Europe. United International Holdings (UIH), building a cable TV system in Wellington (NZ) and part owner of various Australian DTH and cable services (including Austar), is privately telling cable firms in the Pacific that it intends to make Spice International available through Intelsat 802 (174E), C-band linking.

Spice International's London office advises that while "*UIH may be planning to distribute our service in the Pacific, the talks to date have been preliminary.*" In other words, if UIH does this, it could be one year or more before this service is actually available. Of interest, UIH is quoted as telling people, "*We will redistribute this service within Australia on Optus B3.*" This is where Galaxy's present package is carried and given UIH's financial interest in Galaxy, it would seem possible that Spice International might add to the existing adult service offered by Galaxy, or replace it. The Optus B3 service will not reach New Zealand except at big-dish levels. In theory at least, taking Spice International off of Intelsat 802 on C-band, with an appropriate IRD (Philips brand has been previously mentioned for the IRD, [European] Cryptoworks is likely to be the conditional access software) for SMATV installations here would seem more practical than trying to bring it back into New Zealand on Galaxy Ku-band.

3) **Or -**. A third possibility for an adult service to reach New Zealand (Australia seems to be, at least in planning, well covered via Intelsat 702 and Optus B3) would be for the pending Sky (NZ) digital package to include an adult service channel. This is more than a remote possibility.

The Sky digital DTH planning at the moment (as always, subject to a later modification) seems to be progressing as follows:

1) First commercial DTH service via Optus B1: May 1, 1998. Consisting of 8 programming channels for NZ$38.40 per month. Which 8? We believe they will be-

1) Discovery and Trackside as one digital programme channel
2) Orange and MTV as a second
3) Sky News (Australian version augmented by new USA based Fox News) and CNN as a third
4) TNT and Cartoons as a 4th
5) TV1, TV2, TV3 and TV4 as four more (**3**).

For approximately NZ$650, viewers will invest in a satellite antenna, LNB, IRD. If is unlikely the subscriber will actually own (take title to) any of this equipment. They will be offered the "basic" service (just described) and also two optional extra packages, as follows:

3/ Those who observe that terrestrial TV services TV1 - TV4 are included in the Sky DTH "Basic" package will undoubtedly be concerned that by paying $38.40 per month, viewers are in effect paying a fee to receive normally free to air (terrestrial) television. This is not quite as it may appear as we shall report in a future edition of Membership Notes. That it will confuse many viewers is a given, and be a public relations problem for Sky, a "likely."

1) HBO Movies (one channel) and Hallmark Movies (second channel) which when added to basic will cost them a new total of NZ$58.05 per month

2) Sport 1 (essentially the present sport channel) and Sport 2 (including some feeds from ESPN-2 but largely sport feeds provided by the new Fox Sports Net) which can be added to basic for a new total of NZ$53.21 per month

Or,

3) All 12 programming channels for NZ$65.30 per month.

All of this is presently scheduled for May 1 (not March) 1998. The plan is for presently available Videocrypt analogue Sport and Orange to remain on analogue for some period of time after May 1. Six months would seem like a reasonable period of time to convert the analogue subscribers to digital. When that is completed, sometime after May 1, 1998, Sky will launch a 12 to 16 movie channel NVOD (pay per view) movie service on the second transponder. This will allow viewers to select movie titles (3 or 4 offered at a time) and start times (every 30 minutes, each movie restarts on a new channel) and pay for watching that one movie showing. The addressable quality of the digital IRDs, and the connection through a modem to the telephone line into the consumer premise, will make all of this possible.

At this point (mid to late 1998) there are two Ku band transponders functional carrying Sky (NZ) programming; one is their basic plus optional channels, the second is their pay per view movie channels. Most members are aware Sky has reserved three, not two, B1 transponders. The third transponder becomes available to Sky in June 1999 (i.e., Optus cannot release it until that time). How the third transponder will be used remains unsettled. There are additional programmers who would like to be in an enlarged Sky bouquet (a Maori channel, a number of immigrant ethnic channels, narrow casting channels such as CMT). It is in this third and last group that a possible New Zealand "adult channel" service might emerge. Sky has the luxury of waiting until early 1999 to make decisions as to how they will utilise their third transponder. And as anyone who has been a part of this industry a year or longer can attest, a great deal can happen (in the way of new programming availability) between now and early 1999.

UPDATE ON SKY (NZ) COMING UNDER MURDOCH CONTROL

There has been no official statements issued by either Sky (NZ) Network or Murdoch controlled INL concerning their ongoing discussions to allow INL/Murdoch to take over control of the New Zealand pay television service. However, nobody at either firm denies that they are nearing a decision and every sign suggests Murdoch will control Sky shortly.

If this comes to pass (it almost did in January, fell apart in February and then came back in June), it is not irrational to expect Sky (New Zealand) to be folded into a larger operation headquartered in Australia and including the present-day named Galaxy. Both firms are in the same business, both use the same Optus satellite family, both will be sharing common programming. Under common ownership, it makes little sense to have largely redundant staffs on both sides of the Tasman.

Sky (NZ) will not make nor announce a decision on their IRD provider until after the INL deal has come to a logical conclusion. If Murdoch takes over Sky (NZ), there is almost no chance the receiver supplier will be a firm other than Pace. The most logical receiver from Pace, in turn, would be the Indian, Indonesian, Japanese variant of the DVS-211. This receiver is already in use by (Australian) Sky (Racing) Channel as well. (**4**)

This scenario creates a tough decision for the Murdoch people. The Pace receiver selected by Galaxy is uniquely equipped with the Irdeto conditional access system. From the standpoint of upgrade-ability, and future-proofing, the Irdeto CA system is "yesterday's technology." The security of the Irdeto system has been compromised in Europe (by hackers) and there can be little doubt that hackers are close to or have already broken into the Galaxy smart card access control as well. From the Murdoch perspective, it would make more corporate sense to have all of the Galaxy IRDs replaced with the DVS-211 family of smart card IRDs. Of course replacing up to 200,000 IRDs and taking back that same number of Irdeto equipped IRDs would-be a sizeable undertaking, both financial and by the logistics.

4/ A technical review of the operating features of the Pace DVS-211 receiver appears in the September 15th issue of SatFACTS Magazine.

So the ultimate decision as to the Sky (NZ) IRD may in fact hinge on how closely a Murdoch controlled Galaxy (under whatever name it may have in the future), and a Murdoch controlled Sky (NZ) will co-operate. And how anxious Murdoch's people may be to take on the additional debt required to replace the existing Irdeto CA equipped IRDs in use by Galaxy with a more modern, and better security system NDS CA equipped IRD. A selection of the Pace DVS-211 by Sky (NZ) will strongly suggest a similar decision by Australia near term. A decision to go backwards and select the Irdeto equipped Pace receivers for New Zealand will suggest that the existing Australian IRDs will not be replaced under Murdoch.

Australian Services to PowerVu

Techno-politics are playing a major part in the decision making process leading to establishment of a "national standard" for MPEG in Australia. Perth based Golden West Network has announced a decision to utilise PAS-2, Ku band, for distribution of its programming to approximately 4,000 remote sites. The MPEG format will be Scientific Atlanta PowerVu. A similar decision from NT broadcaster Imparja is expected. On an alternate course are Australia's ABC and SBS. Neither will confirm their choice of format at this time, but they appear to be leaning towards whatever format in use by pay TV service provider Galaxy (see preceding report).

[As SPACE Membership Notes is not issued as often as SatFACTS Monthly or Coop's Technology Digest, we run the real risk that this issue of Membership Notes will continue to be in circulation several months after decisions affecting the Australian satellite telecasters have been finalised. We urge members receiving this issue of Membership Notes after early September to refer to a current issue of SatFACTS Magazine or Coop's Technology digest for a more recent update.]

One of the primary issues surrounding the selection of Scientific Atlanta PowerVu as a DTH receiver standard has been price. The least expensive SA unit is in the US$1,300 range which translates to Australian $2,000-plus with taxes and currency conversion. It has been no secret that SA has been dealing with several Asian firms hoping to find a source for a lower cost DTH IRD. Sun Moon Star, the Taiwan firm that produces the Skandia SK888 and other receivers, has been most often linked with SA in this quest.

SA is expected to announce their model 9224 around September 1st; at US$800 list price. This still translates to A$1,200. The 9224 is a less sophisticated baby version of the D9223, with an IR remote and eliminating the multiple audio channel processing capability (two audio channels maximum, versus four with the 9223).

Coincidentally, Golden West Network is telling prospective viewers of their digital service on PAS-2 that the IRD will cost "approximately A$1,000" and service (and receiver availability) will begin around November 1st; both D9223 and D9224 receivers are openly mentioned by GWN engineers. Golden West is now a part of the Australian 7 Network family and (no surprise here) the Murdoch family owns a sizeable stake in the two. 7 Network also recently assumed operational responsibility for the Australian Television International (ATVI) service transmitted on Palapa C2.

So there is a technology war still being played out with respect to selection of a "national MPEG standard" for Australia. Scientific Atlanta has made inroads largely based upon the strength of their relationship with PanAmSat and the ready availability of PAS-2 Ku transmission space at a time when the Australian telecasters need such space. Six months ago it would have been heresy to suggest that some Australian satellite HACBSS telecasters might go off on their own and select a transmission format not in use by their fellow telecasters. At this point in time, selection of PowerVu is just that.

If we understand the legal requirements of the HACBSS properly, some form of "conditional access" is mandatory. The present B-MAC fulfils that requirement; so too would either PowerVu or virtually any other format of softly encrypted MPEG transmission. However, unlike B-MAC which fills an entire full (or half) transponder with a single programming channel, any form of (MCPC) digital (MPEG) offers the broadcaster the opportunity to run one or more parallel services to its primary service channel. Golden West, for example, could easily offer a pay version of their channel, packaging programming which is not free-to-air available. The base cost for digital transmission (to the satellite) is only modestly increased when a broadcaster elects to multiplex two or three or four programming channels into the single data stream of an uplink transmitter. It is not cost effective for

Imparja to operate one digital uplink, and for Golden West to operate a second. What is cost effective is for all of the HACBSS programmers to be together on a single transponder and sharing the costs of a single multiplexed uplink service. Any broadcaster that announces they are going to do it "alone" is probably only telling us a part of the truth; expect new, additional programme service channels to be added to whatever their basic service is in the future.

As a subset of this conversion, Members are by now aware that Papua New Guinea broadcaster EM TV is also announcing, over the air, their plan to move off of Rimsat 142.5E to AsiaSat 2. A SPACE member in PNG advises he has spoken with the EM TV engineering staff and they are saying the service will convert from Videocrypt to PowerVu either at the same time or shortly thereafter. EM TV has been greatly penalised for several years by refusal of the PNG government to allow the station to install their own uplink station. The PNG government owned and operated Telekom service uplink provided for EM TV use to Rimsat has at best been unreliable, poorly staffed, and inadequate in all technical aspects. EM TV is owned by 9 Australia. After more than two years of negotiation, the PNG government has finally agreed to allow EM TV to install their own uplink. This in turn makes possible the switch to AsiaSat 2. Rimsat at 142.5E is now significantly inclined (+/- 1.4 degrees) and any dish larger than 1.8 metres must now track the signal. EM TV's decision to use PowerVu is, they say, "to allow them to also transmit the audio channels for NAU-FM and YUMI-FM." The total here is 3 audio channels. This automatically means EM TV will require the 9223 receiver (not the new, two-channel 9224) for full reproduction. The market for Videocrypt decoders in support of EM TV will obviously not last much longer.

JAPAN ENTERTAINMENT TELEVISION (JET) and DTH/SMATV

NHK television has been a major source of revenue for DTH installers throughout the Pacific. Japan's telecommunications infrastructure mostly looks "inward" and unlike China and many other Asian countries has not seen its internal television as an export product.

JET is a rather bold initiative to change that line of thinking. Several sizeable Japanese firms have pooled their resources to create an export arm for Japanese television. JET presently operates on an MCPC bouquet (PAS-2, 3962 Vt) with one NTSC format and one PAL format feed. Each video format has up to four separate language channels (Japanese, English, Mandarin and Thai). This is a PowerVu service supported by the D9223 (and after mid September, the D9224) receiver.

JET's schedule includes "trendy dramas," soap operas, mystery-suspense-adventure mini-series, game and quiz shows, animation (cartoons), nature and science documentaries, and a wide range of sport (Sumo wrestling [of course], Japanese baseball, soccer, golf, road racing and much more). What JET does is take the best of the Japanese network television productions (which consistently rate amongst the very best in the world for content, production qualities, writing and direction), reworking it for international audiences (which includes language conversion) for redistribution. The schedule presently consists of an 8 hour time block that begins new each day at 5PM Singapore time, runs to 1AM Singapore time, then repeats twice (1AM-9AM, 9AM-5PM). By this time next year the schedule will be 12 hours in length, repeating once. Unlike Discovery and other cable oriented networks, that is the full repeat cycle (!). The schedule is blocked across the board such that weekdays the same programme series (not the same episode) appears on a daily basis. On weekends, the schedule is same-timed for successive Saturdays and Sundays. A printed programme schedule is available.

JET's Jim Hazama (Senior Vice President and General Manager, for Sales and Marketing) and Sean Shibata (Vice President, Sales and Marketing) visited potential cable, broadcast and SMATV affiliates during August in Australia, New Zealand and the Pacific. Hazama is based at their Singapore headquarters, Shibata at the Tokyo production centre. For our cable operation members, JET offers to provide (at their expense) a D9223 IRD (which remains their property). The rate is in the range of US$0.30 per cable home per month for this channel. SMATV firms and smaller cable will possibly be required to purchase their own IRD unit.

JET is working on a sales and promonition programme to tap into the potential SMATV marketplace in Australia and New Zealand. Their experience in Australia, a side effect of the great uncertainty presently overwhelming the Australian pay TV market, was less than satisfactory. However, they feel they can still make a decent showing in Australia by encouraging SMATV system

carriage of their service. Unlike NHK, which has existing commercial relationships in Australia, JET is approaching their distribution on a "non exclusive basis." That simply means no one firm will receive the exclusive rights to act as an agent or redistributor for JET. They have ongoing discussions underway with SMATV developers in both Australia and New Zealand but welcome enquiries from other firms with the capability of expanding their coverage (**5**).

Obvious commercial targets for JET TV are any hotels, resorts or facilities which cater to Japanese tourists in the Pacific. Because four different language feeds are available, it is possible (with multiple modulators) to provide motel viewers (for example) with two channels simultaneously - one in Japanese, one in English. For DTH and smaller commercial establishments, Jim Hazama is studying a business plan that involves a one time annual fee with the viewer providing their own IRD unit.

The September schedule (below) takes an 8 hour time block through a full week. The two remaining time blocks are repeats of the same day's schedule set against a 5PM Singapore "new day start" for each day's programming. It might be tempting to draw a parallel with China's CCTV-4 which does carry up to 5 hours per day in English. This would be a mistake as CCTV-4 is government run with a propaganda intention while JET-TV is a commercial broadcaster with no obvious propaganda intent. Even a parallel to Deutsche Welle and its English service would be inaccurate since DW creates most of the programming specifically for overseas viewing. The JET-TV programming was originally created for Japanese internal distribution and has been adapted (and translated) for overseas use. There is good quality here and it is well worth consideration for SMATV and CATV applications.

JET TV SCHEDULE - First weeks of September 1997

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5PM NZ /3PM AEST	Autumn Story	7 Women Lawyers	7 Women Lawyers	7 Women Lawyers	7 Women Lawyers	7 Women Lawyers	The Ideal Wedding
6PM NZ	Movie	Tell Me I Love You	Tell Me I Love You	Tell Me I Love You	Tell Me I Love You	Tell Me I Love You	Suspense Drama
7PM NZT		Strawberry Story	Pop File	Strawberry Story	Music Video	Strawberry Story	
8PM NZT	Music Video	Nice Journey, Nice Dreams	Romantic Travelogue	Movie	Hokkaido Hour	World Pro-Wrestling	Music Video
9PM NZT	Youth Store	Music Video	Hokkaido Hour			Music Video	Tokyo Friend Park
10PM NZT	Weekend Special	Anne of Green Gables	Anne of Green Gables	Anne of Green Gables	Anne of Green Gables	Anne of Green Gables	Pop File
11PM NZT		That's What I Want to Know	Pop File	Tokyo Friend Park II	Human Theatre	That's What I Want to Know	Japanese Pro Baseball
12M NZT	Tom Sawyer	Pine Sextuplets	OH! Family	Doteraman	Pine Sextuplets	OH! Family	Bakabon
1AM NZT	Weekend Special	Shogun Mito	Shogun Mito	Shogun Mito	Shogun Mito	Shogun Mito	Tokyo Friend Park

5/ Jim Hazama, Senior Vice-President & General Manager, Sales and Marketing; Japan Entertainment Television Pte Ltd., 2nd Floor, Asia Broadcast Centre, 20 Loyang Crescent, Singapore 508984. Tel ++65-546-4647; fax ++65-546-4648; email jim@jettv.com

UPGRADES FOR NOKIA, HYUNDAI MPEG RECEIVERS

SatFACTS for August 15th includes an extensive "side by side" comparison for the Nokia 9500 S, the Hyundai HSS-100C and the "Kosmalski Software" version of the D9223. As Space Member Robin Colquhoun summarised, "If you expect reasoned conclusion as to which is best (of the three), you will be disappointed. *All can be improved.*"

Page 32 of the same SatFACTS issue reports that Skandia Electronics has come out with an "upgrade kit" for the HSS-100C, and also reports development of a "Macro" remote control system for the 9500 S which simplifies use of the installer's "Red Screen Menu." *What does all of this mean*?

The desire for one receiver to be "all singing, all dancing" is intense. And perhaps unrealistic. The root cause of compatibility problems is the failure of broadcasters to adhere to an international MPEG standard. The digital data stream which carries the video and audio for one or more television programme channels can be configured in a variety of ways. MPEG-2, a standard, was supposed to force all voluntary users of this to be marching to the same data stream. However, individual telecasters still have the "right" to modify their data streams to suit their own purposes, while claiming "MPEG-2 compatibility." The most dramatic example we have in the Pacific is PowerVu by Scientific Atlanta. A relatively minor change in the data stream structure makes PowerVu "unique" and forces receiver creators, who wish to make PowerVu reception a feature of their units, to build into receivers a PowerVu unique data stream recognition system.

However, whereas MPEG-2 was supposed to be universal and available to all telecasters without financial or legal penalty, variations of MPEG-2 (such as PowerVu) are proprietary. This means, in the final analysis, that Scientific-Atlanta "owns" the rights to the PowerVu data stream configuration (a combination of patents and copyright) and any firm building PowerVu compatibility into their receivers is immediately risking patent and copyright suits from SA.

The primary "compatibility wars" focus to date has been between MPEG-2 FTA and PowerVu. From this point forward we will increasingly see variants of MPEG-2 developed by the various Star TV (Murdoch / News Corp) operations also at odds with the MPEG-2 standard. The Star TV ordered Pace DVS-211, for example, will in fact tune to PowerVu or NBC Asia services (see **4**, bottom of page 5). Unfortunately, in the standard factory software configuration the receiver will load but not display PowerVu or NBC Asia (and a long list of others as well). This failure to display FTA MPEG-2 (such as the European Bouquet, which the DVS-211 will also load) is very deliberate. As noted on page 4, SatFACTS for August 15:

"Sky is not in the business of supplying access to other broadcasters, even free to air services."

This simply means that all Star/Sky/Murdoch/News Corp receivers are, as they arrive from the factory, totally useless except for their intended purpose. In a sense, this is the reverse of receivers such as the Skandia SK888 which is intended only for free to air services.

Despite these policies, it certainly is possible to create a receiver which does access standard-MPEG 2, and, PowerVu. Neither format requires a "smart card" and that is an important technical concern. Receivers which require a smart card to function (such as the Pace DVS-211) are technically not "DVB compliant." Why? Because the smart card is another layer of conditional access laid on top of the basic MPEG 2 and by definition MPEG 2 is a standard based free to air service. (**6**) Scientific Atlanta, owning the proprietary PowerVu data stream, is not willing to allow other manufacturers to build "PowerVu compliant" receivers without paying a price. Nokia, for example, began discussions with SA last April hoping to be "licensed" for PowerVu software inclusion in future Nokia receivers. Receivers such as Nokia and Hyundai which provide some degree of PowerVu reception (but not blemish free in either case) do so by getting "as close to PowerVu software routines as possible without violating Scientific Atlanta patents and copyrights." If either the Nokia or Hyundai were to produce "flawless PowerVu," there could (would) be legal sanctions. Scientific Atlanta, on the other hand, is able to expand the software for their model 9223 and 9224

6/ MPEG standards allow a programmer to add conditional access to the original MPEG 2 data stream and in fact leave the parameters of the original "DVB compliant" stream intact. Technically, conditional access deviates from "DVB compliant" because of the added layer of data stream addressing.

receivers to include MPEG 2 "standard" reception without copyright or patent sanctions because in this direction, there are no proprietary patent/copyright problems. Why? Because the MPEG 2 standard is the platform, adopted world-wide, from which all other variants originate.

Nokia: Appears to have gone as far with their "PowerVu compatibility" as they can without a licensing agreement with SA. SPACE Distributor Member firm AV-COMM Pty Ltd. (7) has on their own initiative created an "external" solution to the Nokia 9500 S NTSC glitch puzzle. This solution involves tidying up the "red screen menu" technique which creates PAL video at a 60 hertz rate from NTSC 60 hertz programming channels within PowerVu (or Star TV) data streams. AV-COMM has configured a "macro-command" handheld IR unit to load the Nokia red screen menu commands and this eliminates the 17 to 20 separate (and tedious) key strokes normally required for red screen menu NTSC corrections. In the end, you still have a slightly less than perfect NTSC image converted to PAL since it runs at a 60 hertz rate (PAL nominally runs at 50 hertz).

Hyundai: The present ability of the Hyundai to process PowerVu (and Star) NTSC may in fact go past the point where Nokia has stopped out of fear of trampling on SA patent and copyrights. Hyundai owns a US concern, TV-COM, which is in the same league as SA when it comes to being a leading edge creator of MPEG soft and hard ware. TV COM is a fierce competitor with SA for commercial business and certainly they possess the skills necessary to replicate PowerVu if they so wish. Hyundai has recently released, through SPACE Members Skandia Electronics and Bay Satellite TV (7), an "upgrade chip set" for the HSS-100C receivers. The replacement chips correct some (but perhaps not all) of the "lip synch" difficulties with this receiver.

Scientific Atlanta: As reported in detail in SatFACTS for August 15th, new software is now available that allows this receiver to "do" FTA (which SatFACTS has labelled the "Kosmalski Software" in respect of Space Member Francis Kosmalski who gets credit for causing SA to release this version). Members are asking, "*What about those services that will offer subscriptions and require smart card access?*" The 9223 does in fact have a "smart card slot" but a receiver requires more than a place to slip in a smart card. It is in the area of smart card (conditional access) where the most significant confusion will be in the future.

Early receivers (DGT-400, DVR-500, Panasat 520) included receiver areas designated for addition of a "conditional access module" (CAM). A receiver designed for a CAM will usually function on FTA services (such as the European Bouquet - EBB) without the CAM installed. When the CAM is added (a 15 minute job for most receivers), then the receiver is capable of accepting a smart card as well.

For a telecaster planning some level of encryption, but not actually issuing smart cards yet, the data stream for the transmission includes "bits" which are addressed to the CAM. MegaTV, on Palapa C2, started transmissions which were totally free to air. Then it added its CAM-address bit stream but essentially remained free to air. Tests of the Optus Vision service on Optus B3 did essentially the same thing with early tests, adding the CAM-address bits later on.

A receiver (such as the Hyundai) which has no CAM slot and therefore can have no CAM is disadvantaged by transmissions that upgrade to CAM addressing. In a sense, when the telecaster adds data stream bits to address the CAM, if there is no CAM in place, the receiver interprets this to mean the transmission is encrypted (has gone to conditional access). In fact it has not - but for a Hyundai receiver (or others without a CAM) the net effect is the same as if the transmission has become conditional access. An announcement appears on the screen advising "*This channel is encrypted.*"

(It is believed the early Nokia version 1.63 suffers from the same "No CAM on board" software. The Nokia e3 model [version 2.233, the one now being sold] apparently has software on board that purposefully ignores the CAM-on-board data stream bits. This is the reason the Nokia functions with services that are not available on the Hyundai.)

It would seem that a receiver not capable of being equipped with a CAM is at a disadvantage. This may be a temporary situation. It is not the CAM or no-CAM that is the problem here, but rather, the ability of the receiver to deal with instructions to a CAM. If the receiver software is created to ignore

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7/ AV-COMM Pty Ltd - tel (+ +61)-2-9949-7417; Bay Satellite TV Ltd - tel (+ +64) 6-843-5296; Skandia Electronics Pty Ltd (+ +61) 3-9819-2466

the "do you have a CAM?" data bits, possession of a CAM is no longer important. And in fact, the CAM circuitry is typically conditional access specific, designed to process only one version of conditional access (such as Irdeto through the DGT-400 as used by Galaxy). A CAM designed for Irdeto is quite useless for a STAR or Indovision conditional access network. The SA D9223 smart card access will only support PowerVu data streams, as the DGT-400 will only support Irdeto data streams.

What this means is that specific services, operated by firms such as Star/Sky, will only be available through receivers designed for and intended for those services. This is an "on-purpose" commercial plan to limit the usefulness of MPEG DTH receivers to the service of the sponsoring programmer. *Why*?

At this point in time, DTH IRDs are priced in very large quantities in the range of US$325. It is difficult to put together a package of an IRD, dish, LNB, cable and support hardware for much less than US$500 installed. Translated to Australia or New Zealand, that becomes a (local currency) $750-plus hurdle for the programmer (Sky NZ, Galaxy) to cross in signing up subscribers. Galaxy with their present A$199.95 installation fee is subsidising each installation for the difference between the cost of the equipment installed and the amount paid by the consumer for the installation. In effect, Galaxy pays a premium of approximately $500 out of their own pocket to "buy" each subscriber. They can only make this money back through subscription revenues; the monthly or annual fees collected for service.

The option to this subsidy system is to sell fewer (far fewer) dishes overall. If you charge the full amount a DTH dish + IRD system costs, the number of people willing to put out that much money for Galaxy (Sky) service becomes quite small. Programmers are in business to sell programming, monthly, typically in the local currency $50 range. The sooner they get subscribers paying them the $50 per month, the quicker they will become successful. An example of this: When SPACE TV Systems out of Taiwan proposes to "give to consumers the IRD valued at US$450" to receive their Intelsat 702 pay TV package, they are attempting to eliminate sales resistance created by a high installed system price. But these "free IRDs" still cost US$450 (or something close to that) and somebody has to pay for them at some point.

With programmers having to incur "debt" each time they sign up a subscriber, it is a small step for the programmer to insist that the receiver they choose be capable of receiving nothing but their own programming. Why should Galaxy, for example, assume A$500 or more in debt for each new subscriber and then provide a competitor (such as Optus Vision) with ready access to their subscriber base for a competitive programming package? Now you can see why Murdoch and others are insisting that their receivers, which they are subsidising on behalf of the subscribers, should be capable of accessing nothing but their own programming. Galaxy's over the air upgrade of DGT-400s one year ago, which effectively eliminated use of the DGT-400 for AsiaSat 2 FTA reception from the European Bouquet, had a similar effect. The receivers belong to the programmer (title to them passes to the subscriber only under the most unusual circumstances), they are therefore theirs to do with as they wish.

There could be a different approach, of course. Sky (NZ) in charging NZ$650 for installation of their present analogue encrypted DTH units, is getting substantially more for their installation than Galaxy. However, Sky is promising subscribers a change out to an MPEG IRD when the digital service becomes available (May 1, 1998); at no additional cost. Sky, in effect, is giving subscribers use of a Sky owned conditional access analogue package for approximately one year, coming back and replacing the electronics with a (still to be selected) digital IRD. But Sky subscribers do not take title to (own) any of this hardware (a point that is certain to be confusing to some viewers who believe they have "purchased" their 'Sky dish system').

All of this says the industry remains "early days" and the various approaches being tried to get hardware into homes so that programmers can begin to collect around $50 per month for programming delivery are still exploratory. Analysts believe the cost of MPEG IRDs will have to come down to around US$100 before programmers feel they can at least recover their DTH receiving system costs when they charge a subscriber for an installation. Until that day comes, launching a digital pay television business is a very costly adventure.

PROGRAMMING ACCESS QUESTIONS

Optus Vision: No decision yet as to when or even if this experimental B3 service will go into operation. Insiders at Optus warn not to expect a decision before "end of this year." This is a highly complex issue which ultimately will be resolved only when the present battle between Optus Vision cable TV and Foxtel sorts out. Testing continues (B3, 12.550 Hz) but programming value (even of their Disney channel) is limited by frequent interruptions to service. Cam equipped receiver required as a minimum.

Aurora: This platform was created to entice programmers such as ABC National, Imparja, GWN to transfer from B-MAC analogue to MPEG digital. As Membership Notes goes to press late in August,. GWN advises us they still have no decision from ABC as to how ABC will transition to digital. GWN, as previously reported here, has gone ahead and made a deposit on PAS-2 Ku band transponder space in an attempt to coerce ABC into joining them away from Aurora and the Optus satellite platform.

GWN's announcement to "go it alone" on PAS-2 could be more of a negotiation ploy than an actual plan. *We should not be surprised if this plan does not happen.*

Imparja and ABC appearance on PAS-2 Ku (12.321 Vt) in MCPC format is a limited purpose PowerVu distribution intended for reception by oil rigs located off the north-west and north shore of Australia. Gaining access to these two feeds at this time is impossible and will probably stay in that class for the foreseeable future.

AAR-ART/RAI International: On PAS-2, C-band (4153 Hz), appears to be staying in FTA format but at considerably reduced power levels. Publication of the availability of this service resulted in a power level reduction; Australians now require a dish of at least 3m size to access this feed, New Zealanders require 4+m.

SPACE TV Systems: On Intelsat 702 (1774), 12.612 Hz. The status of this service, for either the Chinese/Asian language feeds or the English Exxxtasy feed, remains subject to MPEG IRD availability. Home DTH systems for Asians in Australia have been advertised in the region of A$2,100. We believe the receivers shown on the promotional/barker channel within this 24 channel feed are in fact Philips-Taiwan built and are *not* the intended Thomson announced units. The units (see page 29, SatFACTS August 15) have the name "ACER" on the front, a Taiwanese firm which has a financial interest in the SPACE TV Systems operation. Until the intended Thomson receivers equipped with the Viaccess conditional access software are available in quantity, there is more hype than substance to this service offering.

ANTENNA TV (Greece): Within California bouquet, C-band PAS-2 (3901, Hz). This service appeared for several weeks in PowerVu FTA, has reverted to conditional access. Antenna TV is being used by Australian cable, and falls into the same category as AAR-ART/RAI International; except, it is CA rather than FTA. We have many requests for help in obtaining subscriptions to this service, but no leads as to how that can be done. Can anyone help?

SPRSCS '98

The Fourth Annual South Pacific Region Satellite & Cable Show (SPRSCS '98) will be held January 27 to 31 in Auckland (NZ) at the Waipuna International Hotel & Conference Centre (in the suburb of Panmure). January 27 and 28 (Tuesday and Wednesday) will see a planned return of Mark Long for the Mark Long - SPACE Pacific Installer Certification Course. The general conference will be held January 29-31 (Thursday through Saturday). A booklet describing the 1998 gathering will be in the mails to members the fourth week in September.

The Mark Long Course has been upgraded and revised to reflect a much higher MPEG Digital content (see announcement of the new "*Digital Satellite TV Installation Handbook*," here). The emphasis for SPRSCS '98 will be heavily towards programming, programming access, and the many variants in MPEG-2 IRDs now coming into operation.

We have early commitments from Exxxtasy and Japan Entertainment Television to be on hand as exhibitors and seminar presenters (the Exxxtasy "hospitality suite" should be an interesting experience).

The Waipuna is a single-location facility. Restaurants, recreation, exhibit halls, and conference sessions are all on premises. Lodging rates for SPRSCS '98 attendees will be reduced approximately

25% from standard rates and room sharing will reduce costs even further. However, lodging rooms will probably not accommodate all attendees and early registration is urged. SPACE members have first access to lodging and the booklet to be received late in September will explain the steps to be taken to ensure you have your reservations in hand before the event is opened to non-members.

MEMBER SUPPLIES and SUPPORT

SPACE Member Mark Long's latest educational tool is titled "*The DIGITAL Satellite TV Installation Handbook.*" In support of this book is a newly completed "Satellite Installations" videotape.

As most members are aware, Mark is the world's leading satellite systems tutorial guide and is routinely called upon by major satellite system operators (such as Measat) to conduct training classes for their staffs. His books describing satellite systems and their proper installation have sold more than 1,000.000 copies through the years.

"*The DIGITAL Satellite TV Installation Handbook*" follows on the highly successful "*Satellite TVRO Handbook*" which has been the basis for Mark's instruction course offered by correspondence (mail) to SPACE Members. The evolution from a mostly analogue world to a increasingly digital world is reflected in both the new book and the newly released videotape. And staying up with the changes in technology, members who purchase the new book or tape will have access to regular updates through Internet at **http://www.mlesat.com**.

NOTE: Digital Installation is a separate, lower cost course available through SPACE; the original Certificated Technician Course remains our most complete course. SPRSCS '98 will offer the (NEW) Digital Course January 27-28; details in SPRSCS '98 announcement late in September.

MARK LONG'S NEW-AUGUST 1997-BOOK / TRAINING VIDEOTAPE

☐ **YES** - enter my order for the BRAND NEW "**DIGITAL Satellite TV Installation Handbook**" by Mark Long at the SPACE Member price of US$59.95 plus $15 shipping and handling.
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The DIGITAL Satellite TV Installation Handbook

by Mark Long

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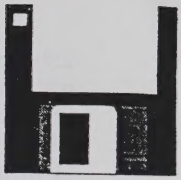

This newly released publication by the best-sellng author of *The World of Satellite TV* provides a comprehensive guide to installing both analogue and digital TV systems. **The DIGITAL Satellite TV Installation Handbook** represents the basic concepts in a graphic intensive format that typically provides two illustrations for every page of text—more than 200 new illustrations are released here for the very first time. What's more, each chapter is concluded with a series of quick check exercises which provide readers with the opportunity to confirm their basic understanding of the material just covered.

Unlike other satellite publications which were written with Europe or America in mind, **The DIGITAL Satellite TV Installation Handbook** was specifically created for readers in the Asia/Pacific region.This ground-breaking new textbook, which was created with the cooperation *SPACE Pacific*, will serve as the official textbook of a new *Satellite Installer Certification Course* developed to serve the educational needs of this trade association's membership.

This handbook comes with a set of two computer disks for IBM compatible PCs which contain full-color charts, graphs, satellite footprints and other illustrations in a JPEG format that is compatible with many graphics software and Internet web browser programmes. Two satellite installation software programmes for PCs running DOS 6.0 are also included on disk.

This exciting new publication also is fully supported by a brand-new web site on the Internet at http://www.mlesat.com. Time sensitive data in the handbook will be periodically updated here as a service to this publication's readership.

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Glossary of Technical Terms
Exercise Answer Keys
Asia/Pacific Satellite Transponder Guide & Frequency Plans
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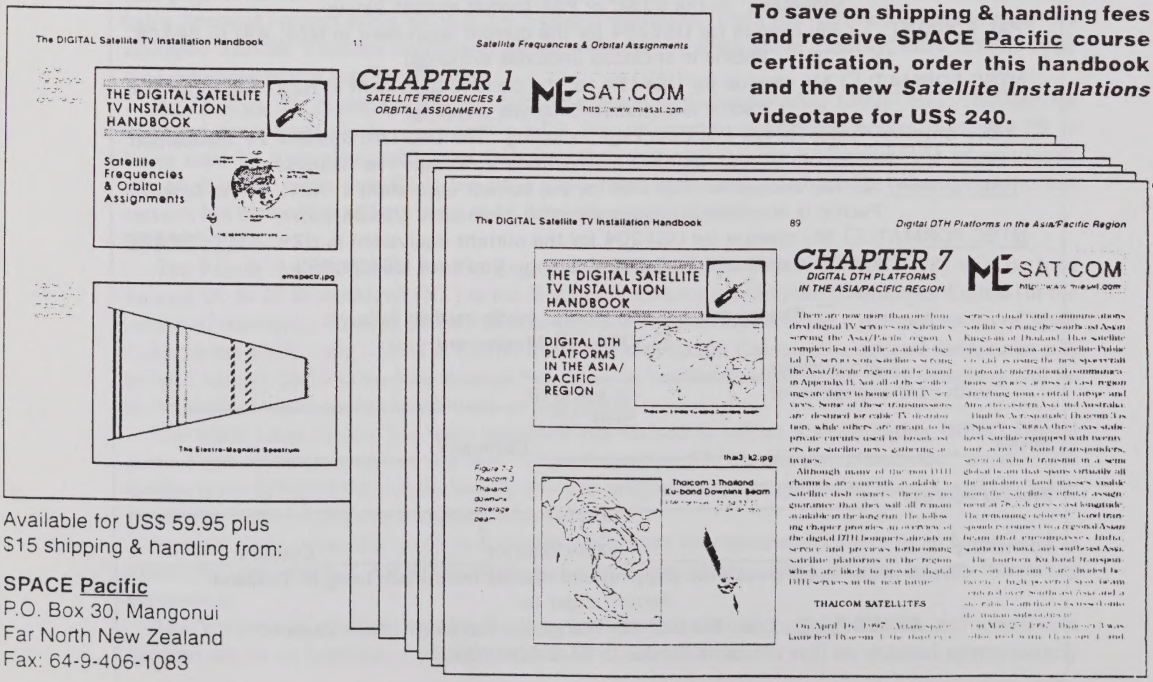

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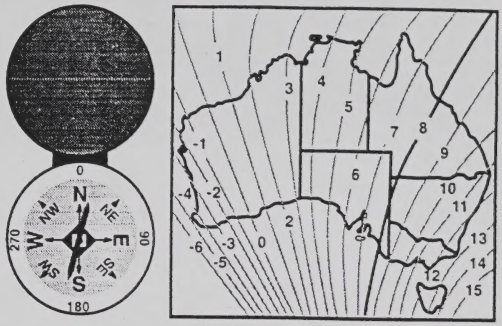
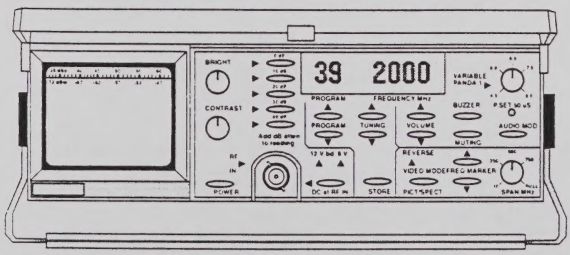


Satellite Installations covers the brave new world of tiny Digital DTH dishes as well as the installation of larger C-band antennas.

The difference between excellent satellite TV reception and poor signal quality often boils down to one thing: the installation. A correct installation performed by a professional installer can pull out that last fraction of a decibel in signal strength, making the difference between problematic TV reception and a perfect TV picture. Few technicians, however, have gained a thorough knowledge of this subject and related information resources have heretofore been limited in scope and not up to date with the latest technology.

Released in August of 1997, the latest in the line of successful *Satellite Series* videotapes from MLE/Shelburne Films is a one-hour graphic intensive videotape written and presented by Mark Long, author of *The World of Satellite TV* and founding publisher of *The World Satelite Almanac*. **Satellite Installations**—which coversthe technical details which every satellite professional needs to know, including basic digital DTH system parameters and installation tips—is part of a new *Satellite Installer Certification Course* expressly designed for members of the **SPACE Pacific** trade association.

Satellite Installations covers the basics, such as site surveys, cable connections, antenna alignment procedures, and component selection, as well as more esoteric topics such as system noise performance, link budgets, dual-band systems, and digital IRDs, as well as how satellite installers can gain maximum benefit from the use of a spectrum analyser. Two hundred full-color charts, graphics and animations are included in this 57 minute VHS videotape, available in PAL or NTSC. Perfect for corporate training and the vocational classroom, this high-quality production VHS videotape is available for US$ 189 (PAL) or US$ 149 (NTSC) plus US$ 15.00 for shipping. Visa Cards accepted. Contact:



An installer's tutorial on portable spectrum analysers is included in this latest one-hour VHS videotape from MLE/Shelburne Films

Satellite Installations Videotape

Contents Summary

Finding the Satellite Arc

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